

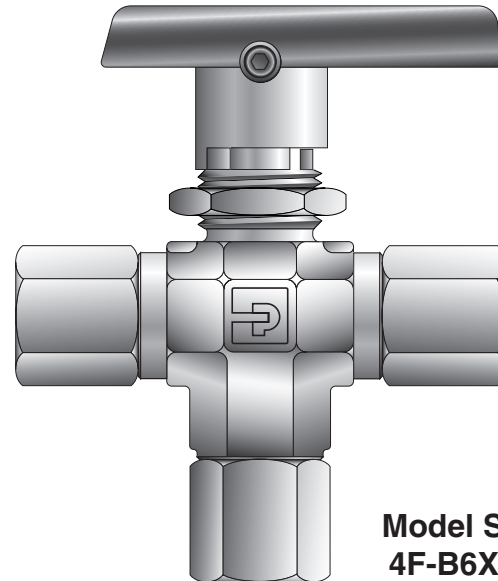
B

Introduction

Parker manually, pneumatically, and electrically actuated three-way B Series Ball Valves may be used as diverting or selecting valves for fluids utilized in process and instrumentation applications. The standard three-way diverter valve is designed to accept media through the bottom port and direct it out of two outlet ports. When equipped with spring-loaded seats, the three-way valve may be used as a selector valve, alternately accepting media from either of two inlet sources (side ports) and directing it through a single outlet (bottom port).

Features

- ▶ Available in 316 stainless steel and brass construction. Monel® Alloy 400 and Hastelloy® C-276 construction available for Diverter Valves upon request.
- ▶ Micro-finished ball provides a positive seal.
- ▶ Wide variety of US Customary and SI ports.
- ▶ 180 degree actuation.
- ▶ Panel mountable.
- ▶ Adjustable PTFE stem seal can be maintained in-line.
- ▶ Handle indicates flow direction.
- ▶ Low operating torques.
- ▶ Positive handle stops.
- ▶ Color coded handles.
- ▶ Optional pneumatic and electric actuation.
- ▶ Optional live-loaded PTFE stem seals.
- ▶ Optional non-adjustable O-ring stem seals.
- ▶ Optional stainless steel and extended handles.



**Model Shown:
4F-B6XJ2-BP**

Diverter Valve Specifications

Pressure Ratings with bottom port as inlet:

Material	Pressure Rating	with PTFE Seats
316 Stainless Steel	6000 psig (414 bar)*	1500 psig (103 bar)
Brass	3000 psig (207 bar)	1500 psig (103 bar)
Monel® Alloy 400	3000 psig (207 bar)	1500 psig (103 bar)
Hastelloy® C-276	4000 psig (276 bar)	1500 psig (103 bar)

* B6 Series: 6000 psig rating or 4400 psig (303 bar) CWP
B8 Series: 6000 psig rating or 4000 psig (276 bar) CWP

Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections,

Pressure Rating with side ports as inlet:

150 psig (10 bar)

Selector Valve Specifications

(Spring Loaded – B6 and B8 models only)

Pressure Rating with bottom port as inlet:

316 Stainless Steel..... 6000 psig (414 bar) CWP*
Brass3000 psig (207 bar) CWP

Pressure Rating with side ports as inlet:

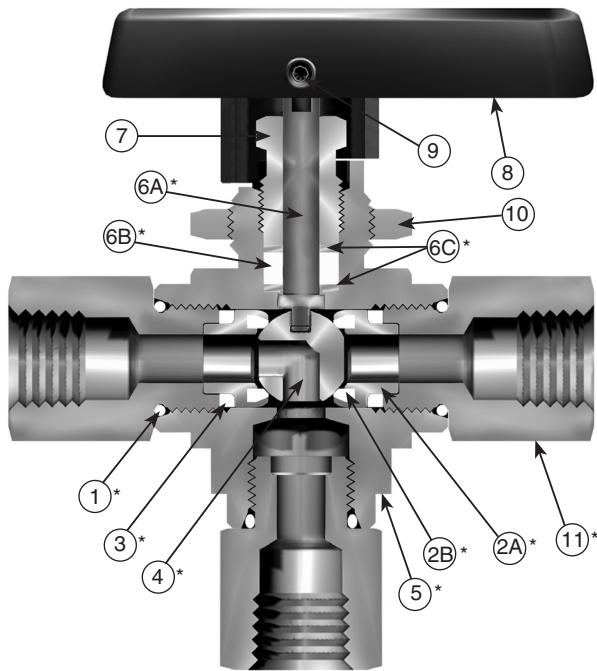
316 Stainless Steel and Brass.....3000 psig (207 bar) CWP

Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections, please see the Instrument Tubing Selection Guide (Bulletin 4200-TS), found in the Technical Section of the Parker Instrumentation Process Control Binder, or the Parker Instrument Fitting Installation Manual (Bulletin 4200-B4).

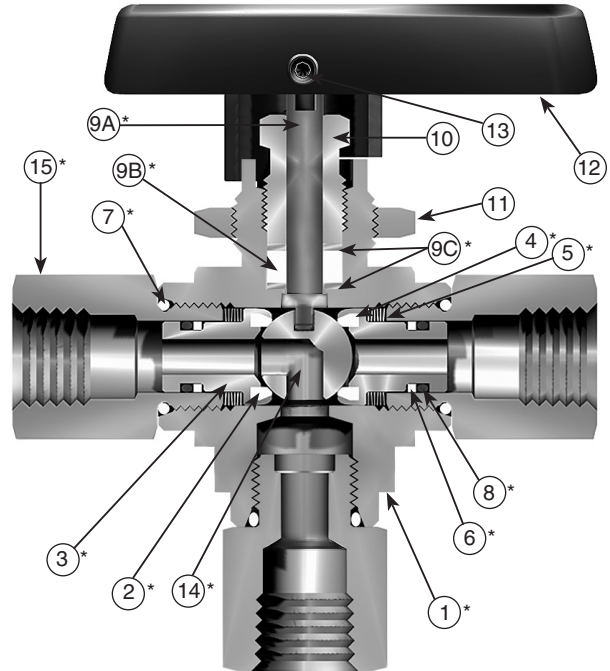
For working pressures of valves with external or internal pipe threads, please see Catalog 4260, Instrumentation Pipe Fittings.

Diverter Valve



Model Shown: 4F-B6XJ-SSP

Selector Valve



Model Shown: 4F-B6XS2-SSP

Materials of Construction

Item #	Part Description	Stainless Steel	Brass
*1	Connector O-Ring	PTFE**	
*2A	Seat Retainer	ASTM A 276 Type 316	ASTM B 16 Alloy C36000
*2B	Seat	PTFE, PCTFE, PEEK	
*3	Retainer Seal	PTFE**	
*4	Ball	316 Stainless Steel	
*5	Body	ASTM A 351 Grade CF3M	ASTM B 283 Alloy C37700
*6A	Stem	ASTM A 276 Type 316	
*6B	Stem Seal	PTFE**	
*6C	Stem Washer	316 Stainless Steel	
7	Packing Nut	ASTM A 479 Type 316	ASTM B 453 Alloy C34000
8	Handle	Nylon 6/6	
9	Handle Set Screw	Stainless Steel	
10	Panel Nut	316 Stainless Steel	
*11	End Connector	ASTM A 479 Type 316	ASTM B 16 Alloy C36000

* Wetted Parts.

** Optional stem seal and body seal materials are described in the How to Order section.

Lubrication: Perfluorinated Polyether.

Materials of Construction

Item #	Part Description	Stainless Steel	Brass
1	Body	ASTM A 351 Grade CF3M	ASTM B 283 Alloy C37700
*2	Seat	PTFE, PEEK	
*3	Seat Retainer	ASTM A 276 Type 316	
4	Spring	Stainless Steel	
*5	Seat Retainer Washer	316 Stainless Steel	
*6	Back-up Ring	PTFE	
*7	Connector O-Ring	PTFE**	
*8	Seat Retainer O-Ring	Fluorocarbon Rubber**	
*9A	Stem	ASTM A 276 Type 316	
9B	Stem Seal	PTFE	
*9C	Stem Washer	316 Stainless Steel***	
10	Packing Nut	ASTM A 479 Type 316	ASTM B 453 Alloy C34000
11	Panel Nut	316 Stainless Steel	
12	Handle	Nylon 6/6	
13	Handle Set Screw	Stainless Steel	
*14	Ball	316 Stainless Steel	
*15	End Connector	ASTM A 479 Type 316	ASTM B 16 Alloy C36000

* Wetted Parts.

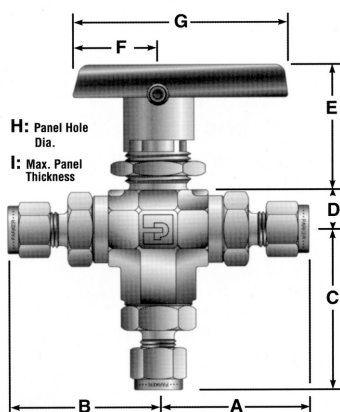
** Optional stem seal and body seal materials are described in the How to Order section.

Lubrication: Perfluorinated Polyether.

***The lower stem washer material is PEEK for B8 Selector Valves.
Lubrication: Perfluorinated polyether.

Dimensions & Flow Data

B



**Model Shown:
4Z-B6XSPKR-V-SSP**

Port Size	Basic Part #	Flow Data				End Connections			Dimensions Inches (mm)						
		Orifice		Cv	X _T *	Port 1	Port 2	Port 3	A†	B†	C	D	E	F	G
Inch	mm														
1A	B2X	0.052	1.3	0.06	0.56	1/16" A-LOK®	1.30	1.30	1.39	0.33 (8.4)	0.94 (23.9)	0.75 (19.1)	1.88 (47.8)	0.58 (14.7)	0.13 (3.3)
1Z						1/16" CPI™	(33.0)	(33.0)	(35.3)						
2A		0.093	2.4	0.21	0.64	1/8" A-LOK®	1.36	1.36	1.45						
2Z						1/8" CPI™	(34.5)	(34.5)	(36.8)						
2F		0.165	4.2	0.63	0.59	1/8" Female NPT	1.07 (27.2)	1.07 (27.2)	1.15 (29.2)						
2M		0.165	4.2	0.63	0.59	1/8" Male NPT	1.18 (30.0)	1.18 (30.0)	1.26 (32.0)						
4A		0.165	4.2	0.63	0.59	1/4" A-LOK®	1.48	1.48	1.56						
4Z						1/4" CPI™	(37.6)	(37.6)	(39.6)						
4M		0.165	4.2	0.63	0.59	1/4" Male NPT	1.35 (34.3)	1.35 (34.3)	1.43 (36.3)						
M3A		0.086	2.2	0.18	0.63	3mm A-LOK®	1.37	1.37	1.45						
M3Z						3mm CPI™	(34.8)	(34.8)	(36.8)						
4A		B6X	0.187	4.7	0.70	0.69	1/4" A-LOK®	1.74	1.74						
4Z	1/4" CPI™						(44.2)	(44.2)	(47.8)						
4F	0.196		5.0	0.87	0.74	1/4" Female NPT	1.51 (38.4)	1.51 (38.4)	1.65 (41.9)						
4M	0.196		5.0	0.87	0.74	1/4" Male NPT	1.62 (41.1)	1.62 (41.1)	1.76 (44.7)						
4V	0.188		4.8	0.70	0.69	1/4" VacuSeal	1.75 (35.1)	1.75 (35.1)	1.89 (37.1)						
6A	0.196		5.0	0.87	0.74	3/8" A-LOK®	1.80	1.80	1.94						
6Z						3/8" CPI™	(45.7)	(45.7)	(49.3)						
6M	0.196		5.0	0.87	0.74	3/8" Male NPT	1.62 (41.1)	1.62 (41.1)	1.76 (44.7)						
M6A	0.187		4.7	0.70	0.69	6mm A-LOK®	1.75	1.75	1.88						
M6Z						6mm CPI™	(44.5)	(44.5)	(47.8)						
M8A	0.196		5.0	0.87	0.74	8mm A-LOK®	1.78	1.78	1.91						
M8Z						8mm CPI™	(45.2)	(45.2)	(48.5)						
M10A	0.196	5.0	0.87	0.74	10mm A-LOK®	1.81	1.81	1.95							
M10Z					10mm CPI™	(46.0)	(46.0)	(49.5)							
6F	0.406	10.3	3.62	0.64	3/8" Female NPT	1.95 (49.5)	1.95 (49.5)	2.29 (58.2)							
8A	0.406	10.3	3.62	0.64	1/2" A-LOK®	2.34	2.34	2.68							
8Z					1/2" CPI™	(59.4)	(59.4)	(68.1)							
8F	0.406	10.3	3.62	0.64	1/2" Female NPT	2.15 (54.6)	2.15 (54.6)	2.49 (63.2)							
8M	0.406	10.3	3.62	0.64	1/2" Male NPT	2.22 (56.4)	2.22 (56.4)	2.59 (65.8)							
8V	0.406	10.3	3.62	0.64	1/2" VacuSeal	2.21 (56.1)	2.21 (56.1)	2.55 (65.0)							
12A	0.406	10.3	3.62	0.64	3/4" A-LOK®	2.33	2.33	2.68							
12Z					3/4" CPI™	(59.2)	(59.2)	(68.1)							
12F	0.406	10.3	6.42	0.37	3/4" Female NPT	2.25 (57.1)	2.25 (57.1)	2.59 (65.8)							
M12A	0.375	9.5	3.46	0.62	12mm A-LOK®	2.33	2.33	2.67							
M12Z					12mm CPI™	(59.2)	(59.2)	(67.8)							
M16A	0.406	10.3	3.62	0.64	16mm A-LOK®	2.33	2.33	2.67							
M16Z					16mm CPI™	(56.9)	(56.9)	(65.5)							

* Tested in accordance with ISA S75.02. Gas flow will be choked when $P_1 - P_2 / P_1 = x_T$.

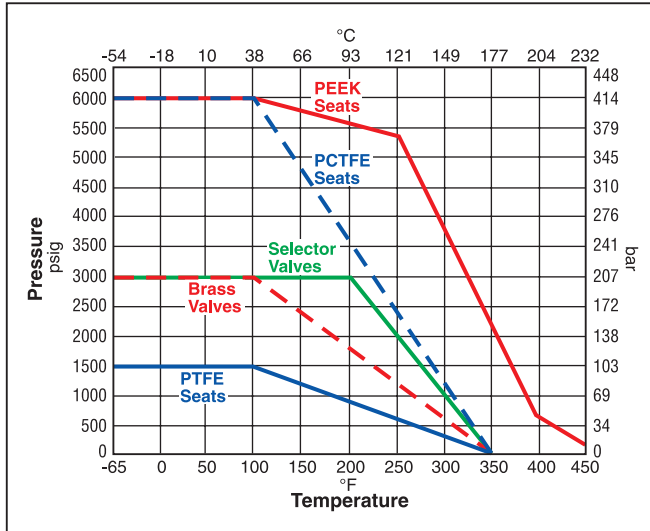
† For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position

Dimensions in inches/millimeters are for reference only, subject to change.





Pressure vs. Temperature



Note: To determine MPa, multiply bar by 0.1

Note: This Pressure versus Temperature chart reflects the maximum temperature range of indicated materials.

When combining seat and seal materials, the most restrictive temperature rating of the seats or seals becomes the limiting factor on valve temperature range.

Elastomeric stem packing and seals are recommended if the application subjects the valve to thermal cycling.

Please see pages 2 and 4 for maximum pressure ratings.

Temperature Ratings:

- PTFE -65°F to 350°F (-54°C to 177°C)
- PCTFE..... -65°F to 350°F (-54°C to 177°C)
- PEEK..... -65°F to 450°F (-54°C to 232°C)
- Nitrile Rubber..... -40°F to 250°F (-40°C to 121°C)
- Fluorocarbon Rubber..... -15°F to 450°F (-26°C to 232°C)
- Ethylene Propylene Rubber.... -65°F to 300°F (-54°C to 149°C)
- Highly Fluorinated Fluorocarbon Rubber -15°F to 200°F (-26°C to 93°C)

Flow Calculations with 1000 psig (69 bar) Inlet Pressure

Two-Way

Valve Series	Max. Cv	Pressure Drop ΔP		Water @ 60°F (16°C)		Air @ 60°F (16°C)	
		psig	bar	gpm	m³/hr	scfm	m³/hr
B2L	0.93	10	0.7	2.9	0.7	92.4	156.2
		50	3.5	6.6	1.5	200.3	338.3
		100	6.9	9.3	2.1	272.0	458.9
B6L	2.34	10	0.7	7.4	1.7	231.7	391.5
		50	3.5	16.5	3.8	494.2	834.7
		100	6.9	23.4	5.3	657.0	1107.9
B8L	6.42	10	0.7	20.3	4.6	637.1	1076.8
		50	3.5	45.4	10.3	1373.6	2320.3
		100	6.9	64.2	14.6	1852.3	3124.8

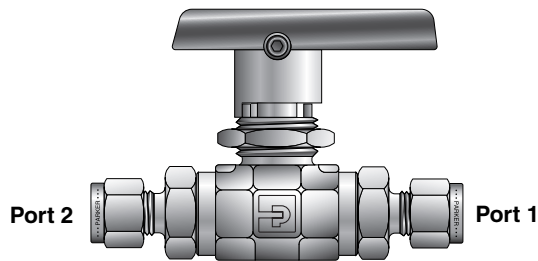
Three-Way

Valve Series	Max. Cv	Pressure Drop ΔP		Water @ 60°F (16°C)		Air @ 60°F (16°C)	
		psig	bar	gpm	m³/hr	scfm	m³/hr
B2X	0.63	10	0.7	2.0	0.5	62.7	106.0
		50	3.5	4.5	1.0	137.1	231.7
		100	6.9	6.3	1.4	188.4	317.9
B6X	0.87	10	0.7	2.8	0.6	86.7	146.6
		50	3.5	6.2	1.4	190.5	321.8
		100	6.9	8.7	2.0	263.2	444.4
B8X	3.62	10	0.7	11.5	2.6	360.6	609.5
		50	3.5	25.6	5.9	789.7	1343.5
		100	6.9	36.2	8.2	1087.4	1836.6

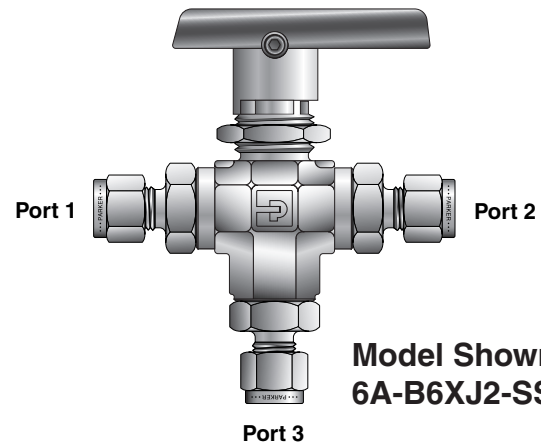


How to Order

B



Model Shown: 6A-B6LJ2-SSP



Model Shown: 6A-B6XJ2-SSP

Ports 1, 2, and 3			Valve Series	Seat Material	Seal Material	Body Material			
1A	1/16" A-LOK®	SSP 316 Stainless Steel BP Brass MP Monel® Alloy 400 HCP Hastelloy® C-276	B2L B2X	J PTFE J2 PCTFE	(Blank) PTFE V Fluorocarbon Rubber EPR Ethylene Propylene Rubber BN Nitrile Rubber KZ Highly Fluorinated Fluorocarbon Rubber LT Live-Loaded PTFE Packing with PTFE Seals VLT Live-Loaded PTFE Packing with Fluorocarbon Rubber Seals EPRLT Live-Loaded PTFE Packing with Ethylene Propylene Rubber Seals BNLT Live-Loaded PTFE Packing with Nitrile Rubber Seals KZLT Live-Loaded PTFE Packing with Highly Fluorinated Fluorocarbon Rubber Seals				
1Z	1/16" CPI™								
2A	1/8" A-LOK®								
2Z	1/8" CPI™								
2F	1/8" Female NPT								
2M	1/8" Male NPT								
4A	1/4" A-LOK®								
4Z	1/4" CPI™								
4M	1/4" Male NPT								
M3A	3mm A-LOK								
M3Z	3mm CPI™								
4A	1/4" A-LOK®						B6L B6X	J PTFE J2 PCTFE S2 Spring-Loaded PCTFE PKR PTFE Lubricated PEEK SPKR Spring-Loaded PTFE Lubricated PEEK	
4Z	1/4" CPI™								
4F	1/4" Female NPT								
4M	1/4" Male NPT								
4V	1/4" VacuSeal								
6A	3/8" A-LOK®								
6Z	3/8" CPI™								
6M	3/8" Male NPT								
M6A	6mm A-LOK®								
M6Z	6mm CPI™								
8A	1/2" A-LOK®	B8L B8X	J PTFE J2 PCTFE S2 Spring-Loaded PCTFE PKR PTFE Lubricated PEEK SPKR Spring-Loaded PTFE Lubricated PEEK						
8Z	1/2" CPI™								
8F	1/2" Female NPT								
8M	1/2" Male NPT								
8V	1/2" VacuSeal								
12Z	3/4" CPI™								
12F	3/4" Female NPT								
M12A	12mm A-LOK®								
M12Z	12mm CPI™								
M16A	16mm A-LOK®								
M16Z	16mm CPI™								

Notes:
 1. Panel Mounting Nut supplied with each valve. Various port combinations are available.
 2. See How to order.
 3. VacuSeal is not available in Brass.
 4. 12F (3/4" Female NPT) not panel mountable.

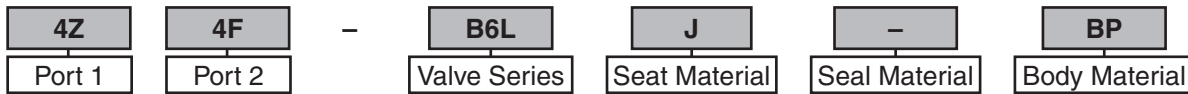
See examples on page 9. See pages 10 and 11 for information about How to Order Options and Maintenance Kits.





How to Order (Continued)

Examples: Two-Way Valves

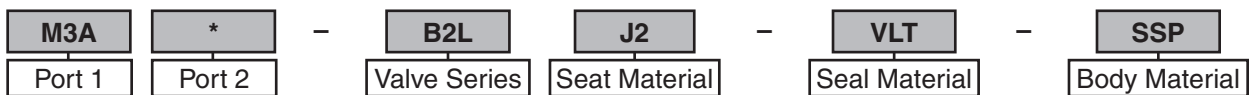


Describes a B6L ball valve with a 1/4" CPI™ end connection for port 1 and a 1/4" female NPT end connection for port 2, PTFE seats, PTFE stem and body seals, brass construction, with a panel mounting nut.



Describes a B8L ball valve with a 1/2" A-LOK® end connections for ports 1 and 2, PTFE seats, Nitrile rubber stem and body seals, stainless steel construction, with a panel mounting nut.

* **Note:** If ports 1 and 2 are the same, eliminate the port 2 designator.



Describes a B2L ball valve with 3mm A-LOK® end connections for ports 1 and 2, PCTFE seats, fluorocarbon rubber body seals, PCTFE packing, stainless steel construction, with a panel mounting nut.

* **Note:** If ports 1 and 2 are the same, eliminate the port 2 designator.

Examples: Three-Way Diverter Valves



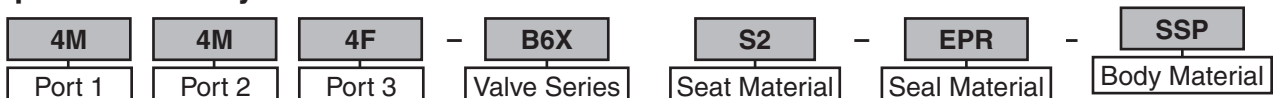
Describes a B6X ball valve with 1/4" CPI™ end connections for side ports 1 and 2, 1/4" female NPT end connection for bottom port 3, PCTFE seats, fluorocarbon rubber stem and body seals, brass construction, and a panel mounting nut.



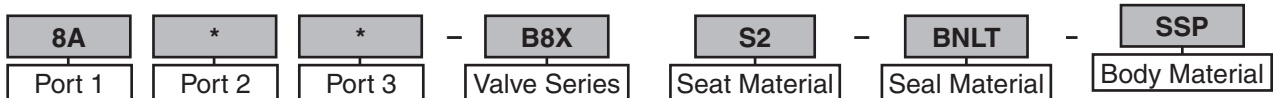
Describes a B2X ball valve with 1/8" CPI™ end connections for ports 1, 2, and 3, PTFE seats, PTFE stem and body seals, stainless steel construction, and a panel mounting nut.

* **Note:** If ports 1, 2, and 3 are the same, eliminate the port 2 and port 3 designators.

Examples: Three-Way Selector Valves



Describes a B6X ball valve with 1/4" male NPT end connections for side ports 1 and 2, 1/4" female NPT end connection for bottom port 3, spring-loaded PCTFE seats, ethylene propylene rubber stem and body seals, stainless steel construction, and a panel mounting nut.



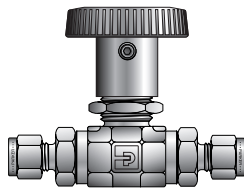
Describes a B8X ball valve with 1/2" A-LOK® end connections for ports 1, 2, and 3, spring-loaded PCTFE seats, Nitrile rubber body seals, live loaded PTFE packing, stainless steel construction, and a panel mounting nut.

* **Note:** If ports 1, 2, and 3 are the same, eliminate the port 2 and port 3 designators.

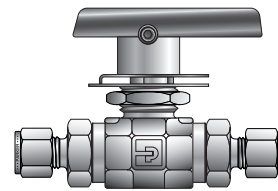


Options

B

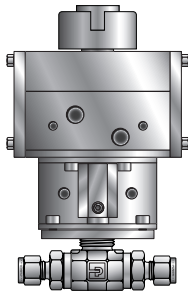


Round Handle

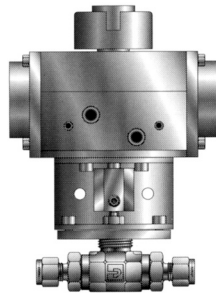


Lock-Out Handle

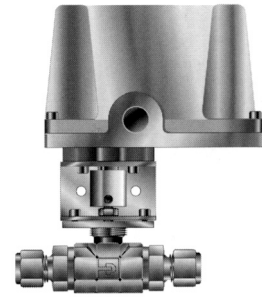
Actuator Options



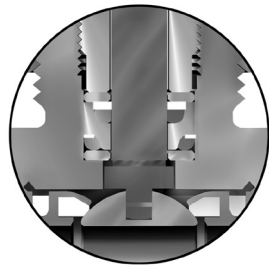
Double Acting (61AD)
Pneumatic Actuator



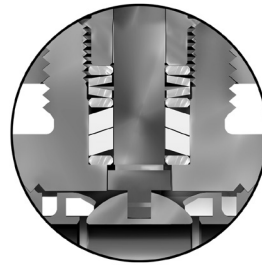
Spring Returns (61AC & AO)
Pneumatic Actuator



70, 80 & 90 Series
Electric Actuator



O-Ring Stem Seals



Live-Loaded Stem Seals

Two-Way Valve Upstream and Downstream Drain Options

For draining upstream or downstream media on two-way valves at pressures below 150 psig (10 bar), add the suffix **-VBU** (Vented Ball Upstream) or **-VBD** (Vented Ball Downstream). Example: 4Z-B6LJ-SSP-VBU. This option is also suitable to vent the ball cavity in vacuum applications. For pressures up to 3,000 psig (207 bar), select **S2** or **SPKR** spring-loaded seats and add the suffix **-VBU** (Vented Ball Upstream) or **-VBD** (Vented Ball Downstream). Example: 4Z-B6LS2-SSP-VBU

Note: VBD and VBU are ball cavity vents only.

How to Order Options

Pneumatic Actuators: For detailed actuator information, refer to the Pneumatic Actuators section of this catalog. For factory assembly, add the actuator part number as the suffix to the valve part number. For field installation, specify the actuator desired. The appropriate mounting hardware may be obtained by adding the valve series and actuator size to the prefix **MK-**.

Electric Actuators: For detailed actuator information refer to the Electric Actuators section of this catalog. For factory assembly, add the actuator part number as the suffix to the valve part number. For field installation, specify the actuator desired. The appropriate mounting hardware may be obtained by adding the valve series and actuator series to the prefix **MK-**.

Oxygen Cleaning: Add the suffix **-C3** to the end of the part number to receive valves cleaned and assembled for oxygen service in accordance with Parker Specification ES8003.

Examples

2F-B2XJ2-V-SSP-61ACX-2
61ACX-2
MK-B2X-61

8A-B8LPKR-BN-SS-71A
71A
MK-B8L-70

4A-B6LJ-EPR-SSP-C3

B

How to Order Maintenance Kits

Lock-Out Devices:

For field installation, simply substitute the correct valve series number after LD.

LD-B8L

Metal Oval Handles: NOTE: Not available in size 2.

B8-OVAL-SS-HANDLE-ASSY

Colored Round Handle Kits: Series-Handle-Color. (Example consists of a green handle and handle screw.)

B6-RD-HANDLE-GREEN

NOTE: Round handles are not recommended for B8 valves with PEEK seats.

Stainless Steel Handle Kits: Series-Handle-SS. (Example consists of a stainless steel handle and handle screw.)

B8-HANDLE-SS

Colored Lever Handle Kits: Series-Handle-Color. Black is standard. B = Blue, G = Green, R = Red (Example consists of a red handle and handle screw.)

B6-HANDLE-RED

Two-way Valve Seal Kits:

PTFE Stem Seal Kits: Kit-Valve Series and Seat Material-Body Material.

KIT-B2LJ-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated PTFE ball seats, two end connector PTFE seals, one assembly mandrel, maintenance instructions.)

Elastomeric Stem Seal Kits: Kit-Valve Series and Seat Material-Elastomer Material-Body Material.

KIT-B2LJ2-BN-SS

(Consists of two stem seal Nitrile rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated PCTFE ball seats, two end connector Nitrile rubber O-ring seals, two seat retainer Nitrile rubber O-ring seals, stem glands and maintenance instructions.)

Diverter Valve Seal Kits:

PTFE Stem Seal Kits: Kit-Valve Series and Seat Material-Body Material.

KIT-B6XPKR-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated PEEK ball seats, three end connector PTFE seals, one assembly mandrel, maintenance instructions.)

Elastomeric Stem Seal Kits: Kit-Valve Series and Seat Material-Elastomer-Body Material.

KIT-B6XJ-V-SS

(Consists of two stem seal fluorocarbon rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated PTFE ball seats, three end connector fluorocarbon rubber O-ring seals, two seat retainer fluorocarbon rubber O-ring seals, stem glands and maintenance instructions.)

Selector Valve Seal Kits:

PTFE Stem Seal Kits: Kit-Valve Series and Seat Material.

KIT-B6XS2-SS

(Consists of one PTFE stem seal, two stem seal washers, two encapsulated spring-loaded PCTFE ball seats, two seat retainer fluorocarbon rubber O-rings, three end connector PTFE seals, one assembly mandrel, maintenance instructions.)

Elastomeric Stem Seal Kits: Kit-Valve Series and Seat Material-Elastomer.

KIT-B6XSPKR-V-SS

(Consists of two stem seal fluorocarbon rubber O-rings, two PTFE back-up rings, two stem seal washers, two encapsulated spring-loaded PEEK ball seat assemblies, three end connector fluorocarbon O-ring seals, two seat retainer fluorocarbon rubber O-rings, stem glands and maintenance instructions.)

Live-loaded Seal Kits:

Kit-Valve Series and Seat Material-Seal Material-Body Material.

KIT-B6LJ2-BNLT-SS

(Consists of one live-loaded PTFE stem packing, two packing springs (B8 series valves have four springs), three packing washers, two PCTFE encapsulated ball seats, two Nitrile rubber end connector O-ring seals, two Nitrile rubber seat retainer O-ring seals, maintenance instructions.)



Actuator Selection Tables

Valve Series	Flow Pattern	Seat Material	Suggested Actuator									
			70 Series			80 Series			90 Series			
			115 VAC	230 VAC	24 VAC	12 VDC	24 VDC	115 VAC	230 VAC	24 VAC	12 VDC	24 VDC
B Series	2-Way	All	71	71	71	73	72	81	81	91	91	91
B Series	3-Way	All	71X	71X	71X	73X	72X	81X	81X	91X	91X	91X
MB Series	2-Way	All	71	71	71	73	72	81	81	91	91	91
MB Series	3-Way	All	71X	71X	71X	73X	72X	81X	81X	91X	91X	91X
HB Series	2-Way	All	71	71	71	73	72	81	81	91	91	91
HB Series	3-Way	All	71X	71X	71X	73X	72X	81X	81X	91X	91X	91X
SWB4	2-Way	All	71	71	71	73	72	81	81	91	91	91
SWB8	2-Way	RT	71	71	71	73	72	81	81	91	91	91
SWB12	2-Way	RT	71	71	71	73	72	81	81	91	91	91
SWB16	2-Way	RT	71	71	71	73	72	81	81	91	91	91

How To Order Mounting Bracket Kits

Valve Series	Mounting Bracket Kit Part Numbers		
	70 Series	80 Series	90 Series
B2L	MK-B2L-70	MK-B2L-80	MK-B2L-90
B2X	MK-B2X-70	MK-B2X-80	MK-B2X-90
B6L	MK-B6L-70	MK-B6L-80	MK-B6L-90
B6X	MK-B6X-70	MK-B6X-80	MK-B6X-90
B8L	MK-B8L-70	MK-B8L-80	MK-B8L-90
B8X	MK-B8X-70	MK-B8X-80	MK-B8X-90
MB2L	MK-MB4L-70	MK-MB4L-80	MK-MB4L-90
MB2A	MK-MB4L-70	MK-MB4L-80	MK-MB4L-90
MB2X	MK-MB4X-70	MK-MB4X-80	MK-MB4X-90
MB4L	MK-MB4L-70	MK-MB4L-80	MK-MB4L-90
MB4A	MK-MB4L-70	MK-MB4L-80	MK-MB4L-90
MB4X	MK-MB4X-70	MK-MB4X-80	MK-MB4X-90
MB6L	MK-MB6L-70	MK-MB6L-80	MK-MB6L-90
MB6A	MK-MB6L-70	MK-MB6L-80	MK-MB6L-90
MB6X	MK-MB6X-70	MK-MB6X-80	MK-MB6X-90
HB4L	MK-HB4-70	MK-HB4-80	MK-HB4-90
HB4X	MK-HB4-70	MK-HB4-80	MK-HB4-90
SWB4L	MK-SWB4-70	MK-SWB4-80	MK-SWB4-90
SWB8L	MK-SWB8-70	MK-SWB8-80	MK-SWB8-90
SWB12L	MK-SWB12-70	MK-SWB12-80	MK-SWB12-90
SWB16L	MK-SWB16-70	MK-SWB16-80	MK-SWB16-90

Note: Mounting bracket kits include one mounting bracket, one nut plate, one coupling, six socket head cap screws, and two set screws.

If the bracket spacer block is required, order separately using the following nomenclature:

SPACER-ACT-75

How To Order Actuators With Mounting Brackets:

Specify the ball valve series and seat material followed by the actuator.

Examples: B6LJ-71C
MB6XPFA-71RX,
SWB12LRT-73CS1

Note: For the SWB Series, actuators can be down sized to fit the application. The actuator selection tables utilize valve combinations at full operating pressures.

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How To Order Kits For Field Assembly

Kit Description	70 Series Part Number	80 Series Part Number	90 Series Part Number
Limit Switch (Two-Way Valve)	KIT-LSW-70-2WAY	KIT-LSW-80	KIT-LSW-90
Limit Switch (Three-Way Valve)	KIT-LSW-70-3WAY	KIT-LSW-80	KIT-LSW-90
Heater & Thermostat (115 VAC)*	KIT-HTR-70-115AC	KIT-HTR-80-115AC	KIT-HTR-90-115AC
Heater & Thermostat (230 VAC)*	KIT-HTR-70-230AC	KIT-HTR-80-230AC	KIT-HTR-90-230AC
Heater & Thermostat (24 VAC)*	KIT-HTR-70-24AC	KIT-HTR-80-24AC	KIT-HTR-90-24AC
Positioner (4-20mA, 115 VAC)	Not Available	KIT-POSITIONER-420-115AC	KIT-POSITIONER-420-115AC
Positioner (0-10 VDC, 115 VAC)	Not Available	KIT-POSITIONER-010-115AC	KIT-POSITIONER-010-115AC

*Heater and thermostat for DC voltages are factory installed only.



How to Order

Electric Actuators for Field Assembly

The correct part number is easily derived from the following example and ordering chart. The four product characteristics required are coded as shown in the chart.

Example 1, below, describes a Model 71, two-way electric actuator unit with a NEMA 4 and 4X rating, a 115 VAC motor with optional heater and thermostat.

Example 1:

71			-	T
[] [] []			-	[]
Actuator Model	Flow Pattern	Voltage	Options	
Actuator Model	Flow Pattern	Voltage	Options	
71	Blank 2-Way	Blank 115 VAC	T	Heater and Thermostat
72	X 3-Way	A 230 VAC	S#	Additional Limit Switch; # = number of limit switches required
73		B 24 VAC		
71R		C 12 VDC		
72R		D 24 VDC		
73R				
81		Blank 115 VAC		
82		A 230 VAC		
83				

NOTE: Mounting bracket kits are required when ordering actuators for field assembly.

Example 2, below, describes a Model 91, two-way electric actuator unit with universal power supply.

Example 2:

91UP

[] [] []			[]	
Actuator Model	Flow Pattern	Voltage	Options	
Actuator Model	Torque in-lb (Nm)	Flow Pattern	Voltage	Options
91	150 (17.0)	Blank 2-Way	UP	Universal Power Supply
92	300 (34.0)	X 3-Way		
93	600 (67.8)			

NOTE: Mounting bracket kits are required when ordering actuators for field assembly.

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